

THE LEISURE HOUR.

A FAMILY JOURNAL OF INSTRUCTION AND RECREATION.

No. 355.]

THURSDAY, OCTOBER 14, 1858.

[PRICE 1d.]



MR. TEMPLE BREAKING TO ELLEN THE INTELLIGENCE OF HER FATHER'S DANGER.

A WIFE'S STORY.

CHAPTER III.—SORROW.

I HAD just entered my nineteenth year, when a heavy and lasting sorrow suddenly fell upon me.

My father complained one evening of feeling un-

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well, and retired early to his room. I had noticed for some days that he had appeared languid and unrested; but he had made light of my fears, and now he attributed his slight indisposition to the heat of the summer sun, and some extra exertion

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he had undergone. He should be well on the morrow, he said.

In the morning, however, he sent for me to his chamber.

"You were a better prophet than I was, Nelly," he said, raising his head from the pillow, and speaking with evident pain; "I have had a very restless night, and have a sad headache this morning. I must indulge myself with two or three hours more bed, Ellen. And draw the curtains closer, dear; the light seems too strong for me."

I drew the curtains close, and then took my father's hand, and leaned over him to kiss his cheek. Hand and cheek burned with dry, fierce heat.

"This is not a common headache, father," I said, in alarm; and though he still tried to remove my apprehensions, he acquiesced at last in my proposal to send for a doctor.

It was too late. He had struggled too long against the symptoms of approaching danger. Before night he was delirious with pain and fever.

I need not tell how, through that night, and many succeeding nights and days, I watched by his bedside, listening to his feeble moans with dreadful forebodings, and administering the medicines, which he would take from no other hand than mine; nor how our constant, sympathizing friend, Mr. Temple, who, with troubled looks which he could not hide, passed restlessly to and fro between the parsonage and Fair Holt almost every hour in the day, first advised, and then entreated, and at length almost dragged me away from the sick chamber, that I might have a short interval of rest, and insisted on taking my place by his friend's bedside; nor how, when my old governess, Mrs. Page, heard of my father's danger, and my trouble, she hastened to Fair Holt to offer her services; nor how sorrowful our servants were, while they shrunk from approaching the room for fear of the infection; nor how oracularly the hired nurse delivered her opinion from day to day, and tried to keep up my spirits by predicting my father's speedy recovery—for she had seen worse cases than his, in which the patient did very well at last. I need not, I say, go over these sorrowful details; for the closing scene was still more sorrowful to me.

I have forgotten to say that, at the commencement of my father's illness, I wrote to Aunt Seymour, and a few days afterwards she came down by coach to Fair Holt, to see her brother; but this was not much comfort to me, for aunt was so used to being waited on, and so little used to nursing, that she gave more trouble than she saved. Besides, when she came and found that my father's illness was an infectious fever, she was too much alarmed for herself to enter the sick chamber. And then she could say nothing to comfort me, but rather increased my alarm by her own terrors. A few words from kind Mrs. Page, or Mr. Temple, did me more good than all Aunt Seymour's abortive attempts at consolation. Indeed, she did not stay long at Fair Holt. She was glad to escape from the danger, I believe, and finding, as she said, that she could not do any good, she returned to London, promising to visit us again when my father would be better.

"I am afraid he never will be better, aunt," I sobbed; but she said that this was nonsense, and

that I must not give way to gloomy fancies; and so she left me.

One evening, when she was gone, and my father had been ill more than three weeks, with only a few lucid intervals, Mr. Temple took me aside. There had been a consultation of doctors that day, and Mr. Temple had had a subsequent interview with Mr. Symonds, our own medical attendant. I could see from Mr. Temple's countenance that he was agitated in mind.

"My dear Ellen," he said, "I trust you are able to say from the heart, 'Not my will, but thine, Lord, be done!'"

I think I should have sunk to the ground then, if he had not seen my weakness, and, supporting me, led me to a sofa. I wept bitterly before I could reply, and then it was—"I cannot—I cannot!"

"You cannot in your own strength, but in God's you may be able, dear Ellen. We have a Father in heaven, my love," said Mr. Temple; and as he spoke, tears rolled down his cheeks; "and he bids us trust in him, and teaches those who love him to say, 'Though my father and my mother forsake me—leave me—the Lord will take me up.' Cannot you say and feel this, Ellen?"

"Then there is no hope," I said, passionately; "and you have to tell me that my father is dying;" and I sobbed convulsively.

"I do not say that, Ellen," he replied; "and all hope is not past. But a crisis is approaching—"

"I see it all," I said; "and you mean to say that I must lose my dear, dear father. Oh, what shall I do?"

Mr. Temple gently soothed me; and when I could listen with more composure he told me that a few hours would, in all probability, decide the anxious question whether the sickness were 'unto death,' or whether my father should be restored again to health. "All that can be done by human means has been done, Ellen," he said; "and now, prayer in submission to the Divine will is our only, as it is at all times our best, resource. But you are worn out," he went on, "with anxious watching and sorrow; I will sit with your father through the night: Mr. Symonds, also, will remain at Fair Holt: you must get some repose, and in the morning, it may be, we shall have good tidings to tell."

I resisted this request at first; but, on the promise of Mr. Temple that I should be aroused if any important change took place, I at length retired with a heavy heart.

I tried to pray: but I could not. Rebellious murmurings swelled my heart, and rose to my lips when I would have said, "Thy will be done in earth, as it is in heaven." I threw myself despairingly on my bed, and sunk into a troubled slumber.

I woke early in the morning, with that heavy weight on the heart and wild confusion in the mind which you, reader, have ere now experienced if you have ever fallen asleep under the pressure of overwhelming grief. The sun was shining brightly into my room, and birds were merrily chirping beneath my window. It was some minutes before I could awaken to a full remembrance of the agony of the previous evening; and then, bitterly re-

proaching myself that I had been able to sleep while my father was perhaps dying, I rushed from the room, and tremblingly glided into his chamber.

He was sleeping heavily, and by his bedside sat our kind friend, Mr. Temple. He looked up pityingly, I thought, as I entered, and then noiselessly rose to meet me.

"There has been no change during the night," he said, "and Mr. Symonds has just returned home. He will look in again presently."

An hour later, my father opened his eyes, and his first glance fell upon me. He stretched out his hand and smiled. Oh, what tumultuous joy throbbled in my heart then! My father's consciousness had returned; and in that smile I saw, as I believed, a presage of his recovery.

Alas! the joy was of short continuance. Before noon I was tenderly admonished to prepare for the now inevitable stroke: my father was, indeed, dying.

Through the afternoon of that never-to-be-forgotten day, I sat by his side, my hands clasped in his, while the cold damp of death already bedewed his forehead. In broken sentences he whispered his last prayers for me, and his last blessings upon me. "God will not leave you comfortless, Ellen," he said; "do not forsake him, and he will not forsake you. He will be the strength of your heart, and your portion for ever: he is mine. What should I do now, Ellen, if I had not a Saviour to trust in and to lean on? Be of good cheer, my dear, dear child; only trust in him. Kiss me once more—once more, Ellen."

A sudden convulsion interrupted his utterance. Help was at hand, and they raised him that he might breathe more freely. Once he looked at me, and moved his lips as though he would have spoken; and then he fell backwards heavily. My father was dead!

They led me from the room; and of what more passed on that mournful day I have but a slight remembrance.

My kind friends, Mr. Temple and Mrs. Page, relieved me of the painful duties which, at this time, must otherwise have devolved on me. In the course of a day or two, my uncle Seymour also arrived, to give attendance to my father's funeral and the arrangement of his affairs. I must pass over the former event, only saying that we laid him by my mother's side, in the village churchyard.

By my father's will, my uncle had become my sole guardian, until I should be twenty-one years old, and then, of all that he had died possessed, I was to be the untrammelled mistress.

My uncle Seymour was, I have said, a man of business; he was also a man of few words. He was kind, however, to me, his orphan niece, and asked me if I had formed any plans for the future.

"No, I had not," I said, with a heavy sigh and a sad heart.

"You had better return with me to London, then, my dear," he said, "and leave Fair Holt, at least for a time, till the first sharp pain of this bereavement has passed away."

"Oh, do not ask me to leave my home, uncle," I said, imploringly.

"I hope you will make my house your home,

Ellen," he replied. "It will be the best plan, I believe, for it will not be proper for you to live here alone. Indeed, I think it will be better to find a tenant for Fair Holt until you are your own mistress. It will take a world of trouble off my hands."

My uncle did not mean it unkindly; but I felt then, that in him I should have a peremptory, though a conscientious guardian. His plan, however, was probably the most judicious that could be devised, and, as Mr. Temple concurred in it, I did not feel that I could resist his wish. Due arrangements were accordingly made; my father's servants were paid off and dismissed—all excepting Susan, my own maid, who was to accompany me to London; the house was, for the present, left in charge of the old housekeeper, under the offered superintendence of Mr. Temple; and two or three weeks after my dear father's funeral I bade a sorrowful farewell to the home and friends of my childhood, and was on the road to London with Susan and my uncle Seymour, who, impatient of the interruption caused to his business by his long absence, had somewhat hurried my departure.

A VISIT TO THE MINT.

SOME years ago I paid a visit to the Royal Mint, and derived so much pleasure from all that I saw and heard, that I wish to multiply my joy by communicating it to others.

But, first, let me state a few preliminaries with reference to admission. Unless a person is known to the master or one of the principal officers, it is sometimes difficult to obtain an order. This passport being procured, the best time to go is in the forenoon, between ten and twelve, as all the departments are then in full operation. The visitors, on arriving, remain in the waiting-room till a party is formed, and are then conducted by a guide through the establishment. Their visit is limited to forty-five minutes; and they are requested to observe two rules—not to touch anything, and not to speak to any of the workmen.

Being fortunately acquainted with one of the officers, I was introduced by him to a brother officer of great suavity, patience, and intelligence—three prime requisites in a guide. I had therefore, in some degree, a dispensation from the restrictive rules on strangers, and had everything specially explained and exhibited to me.

From a list, hanging up in the waiting-room, I copied the various parts to be visited:—"Silver Melting-house—Gold ditto—Rolling Room—Adjusting ditto—Cutting ditto—Marking ditto—Annealing ditto—Weighing ditto—Press ditto—Die Press ditto—Die Turning Shop."

Let us first go into the

GOLD MELTING-HOUSE.

Six burning furnaces first attract your attention, and, if your eyes are strong enough to stand the intense glare, you can see in each a potful of molten gold.*

* The Bank of England sends the gold in sets of 100 ingots, each set weighing 14 cwt. These ingots are in the form of bricks, and are melted and brought to standard gold by an alloy of copper or silver.

While we were waiting to see the gold decanted, my guide told me, by way of digression, that he had been connected with the mint establishment at Soho, near Birmingham; that Soho had furnished all the machinery for the Royal Mint; that it had sent a mint to Denmark, Prussia, Russia, Portugal, Bombay, Calcutta (twice the size of the English mint), and eleven to South America.

But, to return from this digression, we now see upright moulds, placed to receive the fluid gold. A workman passes along, and rubs the inside of the moulds with oil, that the metal may run more freely. After the gold has been in the furnace about half an hour (silver requires rather less time), a workman brings out a potful of the melted metal. It is far too heavy for him to hold easily or pour steadily; but it is placed in a ring, and supported by a lever crane. An attendant balances the vessel by means of a rope attached to the lever, and thus takes off all weight from the hand of the workman, who is thereby enabled with ease and steadiness to empty his vessel into the moulds.

This operation afforded a most beautiful sight, and, as the fluid was poured out, I never grew weary of gazing on the ripe orange hue of the abundant stream. Small pieces of coke also entered the moulds; but, from their less specific gravity, they floated to the surface, and were easily separated. After the gold had stood a little while in the moulds, it appeared of a greenish-white colour; but that was merely a superficial crust, no thicker than common paper. The moulds were next disjoined, being formed of iron bars, and out came the wedges of gold, which were immediately plunged into water.

Here I was surprised to see a great many blank sovereigns* cast into a pot, and placed in the furnace. The explanation of this is, that imperfect blanks and brockage,† cuttings, and the like, are recast, and go through the whole process again.

Only one and a half grains on the pound troy is lost during melting.

Let us next pass to the

ROLLING ROOM.

What a sight was this—bars and sheets of gold in great profusion! Two tons and a half of this precious metal are here rolled out in the course of a single day. My interpreter caused me to feel the weight of a rough-cast bar, and said, "You now hold in your hand £1200 of gold."

The bars, apparently of a uniform size, scarcely three-quarters of a yard long, are presented to the rollers, by which they are laminated and reduced to the determined thickness—that is, seven grains too heavy. There were in this room six gradations of rolls, reducing the thick bars to sheets, which are then termed fillets, ribbons, or lengths.

But in the process of rolling a difficulty arises; for the gold, when about two-thirds rolled, becomes hard and brittle, and quite unfit for stamping. It is therefore annealed in the following manner: the fillets are placed in copper cases, of cylindrical form, and again subjected to the fur-

nace. On being taken out, they are dipped in water, and become as soft as pewter. A workman here took up, as he was directed, a few fillets, three-eighths of an inch thick, and bent them with great ease.

I was next shown circular shears, "that never tire." These are horizontal circles of iron, kept constantly revolving by the machinery. The great advantage of this invention seems to be that no time is lost by the ascent, as in other shears; but these iron circles cut inch-thick metal without a moment's pause or cessation. They seem dangerous articles for a stranger to approach, and were fenced in and secured by a guard, as soon as they had been exhibited. They are seldom employed, being intended for copper; but this coin is not often made at the Royal Mint.

We next inspected the long shears, which rise and fall vertically. They have to open and shut, and only cut half as fast as their circular neighbours. However, they have more power, which they manifest by speedily snapping asunder bars of gold an inch and an eighth thick.

There were fillets or sheets of gold lying about, having two or three holes, the size of sovereigns, punched in them, in a zig-zag order. This is done to test them, and to determine whether the inside of the fillet is of the same thickness as the outside rim.

Passing along, I had a glance of the cooking-room, which called for an explanation, and suggested an excellent episode.

Before the men leave the Mint, the gold, which was weighed out to them in the morning, is weighed back in the evening. No workman can leave the premises during the day, and therefore he has his food in the establishment. Three messengers wait upon the workmen, and cook their food by means of gas. I saw a number of them dining very comfortably at a common table. Such arrangements are made in order to diminish the opportunities of dishonesty; and I am informed that there is scarcely any loss now. Fifteen years ago and more, there were occasional losses, of which I record two instances.

One of the workmen—an old soldier—watched a moneyer,* as he was carrying various bags of gold, struck him down, and locked him in. The rogue then seized four of the bags and ran off, got on board an American ship, and probably fancied himself safe; but the Bow-street officers were sharp men—very blood-hounds of Themis; and they hunted and caught the thief. He was brought back, and hanged.

The other instance was still more tragical. A workman, tempted by the gold passing through his hands, and instigated, as it is supposed, by some receivers, stole sixty sovereigns, and disappeared. A vigilant search was made, but he never afterwards was seen or heard of. Not the slightest trace was ever found of the unhappy robber; and it is surmised that the receivers murdered the man and disposed of his body.

By these and like robberies vigilance was awakened, and has never since then gone to sleep.

We next proceeded to the

* Blanks are sovereigns yet unstamped.
† Brockage means imperfect coins.

* Moneyers were persons who contracted with government to coin the gold and silver. This system is now abolished.

ADJUSTING AND CUTTING ROOMS.

However correct the fillets may be, they are brought here to be adjusted, so that a piece of proper size, punched out of any part of the fillet, may have the exact size and weight of the intended coin.

The fillets are brought to this department seven grains heavier than they need be. Each length of gold is inserted about two inches into a flattening machine. The part so inserted is "pinched" half as thick as the remainder of the bar. It is then taken to a machine, called a drawbench, where the pinched part is inserted between two steel cylinders. The fillet being drawn through, is cut into four lengths, and given to the "tryer," who takes each length, and with a punch, the size of a sovereign, cuts out a blank, and weighs it. Invariably it is about standard weight.

In the CUTTING ROOM there were twelve presses ("cutters"),* some of which only were in operation. The action of the press is vertical, and at each descent it cuts a sovereign out of the golden sheet. The piece falls into a box below. I stood about a minute, admiring the process; and in that time sixty sovereigns were cut out, and fell into the receiver. My friend here remarked that the labour is not so tedious as needlework; and that this part used at Birmingham to be intrusted to women.

Trays of sovereigns were lying about this room, but, after all the bars I had seen, these appeared mere bagatelles. "How many sovereigns are in each of these trays?" "Only five thousand."

On leaving this room I observed a lad packing up cuttings and remnants of gold, to be remelted. This is technically called "scissel," from the Latin *scissum*—cut. It forms about a third of the original metal.

THE SIZING ROOM.

Each individual blank is "sized," "checked," and "rung"—i. e., each piece is weighed, to ascertain whether it is standard weight; then reweighed by another set of men, called checkmen. The good blanks are passed to the ringing-boys, who sound them on iron anvils, and reject those which do not ring.

My attention was called to two formidable doors in each room, having double locks, and requiring two keys to open them, and these keys kept by two different persons. At night a third key is required. These are the strongholds where the gold is kept.

THE ANNEALING ROOM.

The blank sovereigns being very hard and brittle, come here to be softened and tempered. One of the officers amuses the visitors by telling them that the gold is here roasted, boiled, and baked. Certainly there is some truth in that humorous description; for the blanks, in iron boxes, are put into the furnace; then they are boiled in diluted sulphuric acid, in order to remove every particle of impurity; lastly, they are put into an oven to dry, and then shaken in beechwood sawdust, that they may be clean and warm to receive the impression.

During these processes, great delicacy is re-

* The power of these cutters equals a pressure of 40 tons; but the extreme pressure, 100 tons.

quired; for the blanks, if heated even a very few degrees more than enough, would run into a mass; and if they were not sufficiently heated, condensation would take place, and the impression would be spoiled.

We were now conducted to the

PRESS ROOM,

where the blanks are stamped and become coins. This process was admirably explained by the superintendent of the room. He first showed the lower part of the press, round the top of which he placed a milled collar. This collar rested on a spring. He then placed the blank upon the lower die, and showed how the spring causes the collar to rise. Then the upper die descends with great force, by mere impetus stamps the impression, and expands the gold till it fits and fills the collar, and at the same instant the milling is transferred to the edge of the piece. The dies are made of cast steel, very finely tempered and engraved.

Just behind the die there sat a workman filling a tube with blanks, and this he kept replenishing. At each movement of the press a blank dropped from the tube, and was seized by a pair of pliers ("layers-on"), just like artificial fingers. These pliers bring forward each successive blank, and place it upon the die, and in doing so they push the previous coin aside.* Formerly this part used to be performed by hand, and the consequence was that the fingers of the men were occasionally crushed by the descent of the tremendous press. And yet it was strange to notice the docility, so to speak, of this powerful machine. Two cords, called the starting and stopping lines, when drawn, instantly set the press in motion, or instantly arrest it. By means of improved machinery they now stamp two hundred coins in the same time that they stamped a single coin seventy years ago.

Each press stamps upon an average sixty pieces per minute, or 3600 per hour; and, consequently, in a day of ten hours, 36,000 pieces. There are eight presses in the room, each adapted to every species of coin, and, if they were all in operation, they would stamp 288,000 pieces daily.

A very striking proof of the improved management of modern over olden times was also given. In nine weeks, gold to the amount of four millions sterling was coined and delivered to the Bank (besides 180,000 Crimean medals.) The moneyers would have received £15,000 on this coinage, whereas it was done under the new system at about £3500. By this economy the public saves £11,500 in about two months.

Last of all we came to

THE WEIGHING-ROOM,

where we found a gentleman weighing the blanks in Cotton's Automaton Balance, the most perfect of all weighing-machines. Above the balance was a concave inclined receiver, along which the blanks slid down, and were weighed. There were three apertures by which the blanks descended respectively, according as they were *heavy*, *medium*, or *light*. The heavy and light are re-cast; the medium only are retained for circulation, although

* One of these new-born coins, just as it dropped fresh and brilliant from the die, was presented for examination. I had expected to see 1856 upon it; but on inquiry found that a few dies of 1855 were left, and that they were being used up. My visit took place in January, 1856.

they are not quite standard weight, but very nearly so. "You never have," said the officer of the balance, "you never have a sovereign in your pocket worth twenty shillings. Not five sovereigns in a thousand are standard weight; and yet, when the temperature and atmosphere are favourable, we can weight within the 1-150th part of a farthing's value."

He next called attention to a most delicate pair of scales, which deflect eight times out of ten with the thousandth part of a grain—the smallest fraction used for practical purposes. Remarking that a cleveland or grain of wheat was the origin of all troy weights, he showed us the 1-100,000th part of a grain; and, if a microscope had been at hand, he could have shown a millionth part.

I felt a curiosity to know why blank sovereigns that were only a very little above *medium* should be rejected and remelted, when a touch of the file would reduce them to the proper weight. It was explained that this would be an imperfect mode of coining. Besides, it occurs to me that on these filings there would be loss, waste, and temptation.

After many expressions of gratitude and satisfaction, I walked away without one covetous desire, but rejoicing that my country in these critical times had such sinews of war.

THE SKETCHER IN NORTH WALES.

CHAPTER IX. — PENRHYN SLATE QUARRY — NANT FRANCON.

FOR the last few days we have been haunted by slates, slates, slates. At Llanberis was a slate mountain staring us out of countenance all down the valley—firing at us a regular battery every hour—and walling in one side of the landscape to the height of fifteen hundred feet. At Carnarvon a forest of slate, in the shape of house-tiles, millions in number, and covering acres of ground, the contributions of a dozen other slate mountains, lay on the quays waiting embarkation. Over all the track of country between Capel Curig and Bangor, by way of Carnarvon, we have found slates doing the duty of stone and timber; the road walls are slate walls—the door-steps are slate steps—the fence, that should be of hurdles or hedge-stakes, is of stout strips of slate a couple of inches thick—the field style, that should be of oak beams, is of slate slabs—the five-barred gate, that immemorial rustic institution, is here a five-barred slate—and the railings and the wickets, not to mention such a trifle as the turnpike-roads themselves, are all of slate.

It is a sweltering hot morning when we set out to have a look at the Penrhyn slate quarries, and the idea of walking the six miles which separate them from Bangor is out of the question. So we mount a car, and, leaving the long straggling old city behind us, are soon trotting towards the mountain. On the road we pass Penrhyn Castle to the left, and obtain a fair view of this, one of the finest specimens of the old Norman style of building adapted to the purposes of a modern mansion. The castle stands in a park seven miles in circumference, and embracing all that is delightful in landscape scenery—masses of wood, rushing

streams of water, beautiful swells and slopes of meadow land, and a distant mountainous view. The building is of vast extent, comprehending seven lofty towers, the largest being a modern reproduction of Rochester Castle. The interior is said to be unrivalled in point of splendour, and in its gorgeous abundance of every species of luxurious decoration.

Before reaching the quarry we pass through the village of Bethesda, now a town of considerable size, inhabited chiefly by the families of the quarrymen. Here we are assailed by hordes of children, who, racing after the car in the blazing sun, insist on selling us specimens of the slate, worked into the forms of books, paper-weights, ink-stands, tables, boxes, etc. The poor little urchins are evidently driven to this traffic by their parents, and they pursue it with a persistency which, coupled with the disappointment, almost despair, they evince when their efforts fail, raises an unpleasant suspicion as to the nature of the pressure which goads them to their task.

On leaving Bethesda, the road turns to the right and winds through a woody glen, where birches and dwarf oaks overshadow the way, and where the slate rock crops out through the soil in a thousand grotesque and picturesque forms—the grey masses mingling with groups of ferns and fox-gloves—their shapeless bulk now bare and angular with the sharp fracture of yesterday, now white with lichens, or green with a covering of spongy moss. But now there is an opening in the glade—the terraced sides of the slate mountain break in upon the view—the car pulls up under the shadow of a long shed, and alighting, we are directed to walk forward and meet the guide, who, near this point, is always on the out-look for visitors.

The guide beckons us up a long flight of steps, which lands us on a large irregular platform of rock, and, like a sensible man, instead of plunging into an ocean of talk, simply waves his hand towards the vast chasm before our eyes. Truly it is a spectacle which may well be allowed to speak for itself. From a mountain some fifteen hundred to two thousand feet in height, a mass of about a thousand feet high, and perhaps half that in average depth, has, in the course of the last few years, been quarried away. The excavations have been carried on in a series of terraces one above another, like the steps of a vast amphitheatre, and each about sixty feet in height. Of these we count twelve rising above the level on which we stand, but we are in a platform two hundred feet above the lowest level in sight, and in that lower level we discern shafts sunk to a depth lower still, and tunnels bored in the solid mass and lined with tramways for downward working. In one or two places, huge pointed crags rise amid the regular workings, and serve to show what was the original elevation of the rock at the points at which they stand, and consequently to give us an idea of the immense masses of the mountain which have been lifted from their foundations. These remaining crags, the guide tells us, are bad slate, not worth the quarrying—a geologist would probably say they are not slate at all, but some granitic formation upheaved amidst the slaty deposits in some remote pre-Adamic convulsion.

As is the case with all enormous objects, the

real extent of this monster quarry does not come home to the spectator at the first view. Even when the guide tells you that it is a mile from the point at which you stand to such a point on yonder terrace, though you accept the fact you are apt to lose its significance. At first sight the long range of terraces seem all deserted, and we look in vain for the two thousand seven hundred hands said to be employed. But look again! what are those diminutive specks like snow-flakes, which are adhering to the grey slate rock? Observe them; they are the white shirts of the men, who, suspended by ropes from the terraces above, are boring the mountain; the stalwart quarryman of six feet, you see, is reduced to a mere speck by distance—and it is not till you have realized that fact that the vast extent of the works, and their relative proportions, are fully comprehended.

The plan of quarrying the rock by terraces is not only the most economical, but is really the only one by which the whole of the valuable slaty material could be made available. The waste of a slate quarry is so great, that by any other system the cost of removing it would swamp the speculation. On the terraces, the waste of each terrace is carried away in the trams, and the working is thus kept clean. All the terraces, working simultaneously, recede together, and the whole mountain moves off at an equal pace, and will finally disappear; in the meanwhile a new mountain, or several new ones, will be formed out of the useless wreck, and these in time will become covered with vegetation and verdure like their neighbours.

But for the use of gunpowder, the mountain could not be quarried at a profit. The boring and blasting goes on all the day, and all the year through—the firing taking place regularly every hour. There are ten working hours in the day, and the mountain therefore fires ten broadsides between sunrise and sunset. It is now just on the stroke of eleven, and hark! there blows the horn which gives the signal of preparation, and warns every man to betake himself to a place of safety, out of the way of the flying fragments of rock. For this purpose a number of refuges—holes dug in the slate, or strong wooden sheds—are established at various points, so that no man need peril his life by exposure. You see the men and boys are hurrying from their work and disappearing from view; and now the horn sounds again—that is the signal for lighting the fuses, and the discharges will soon follow. For a minute or two all is still, and that white cloud that sails along the sky looks down upon a scene of motionless quiet; but lo! there shoots from the rocky ribs of the mount another white cloud, which, rolling itself up like a ball, seems to be scampering after it; and now, crash! comes the report, at first with a sharp detonation, and then with prolonged echoes in thundering reverberation hurled back from the sides of the distant hills. These echoes have not half ceased when another explosion follows, and then another, and another—the slate mountain is firing its broadside in consecutive shots—the crash, the war, and the rumble are deafening; and hark! far down in the bowels of the earth the subterranean workers are gallantly returning the fire, and low booming sounds swell up from the unseen depths. Now they have all ceased; no, there goes

another shot from a fuse which had hung fire: that is the last; the horn blows again to say that all is over, and that the men may return to their work.

The effect of the blasting by gunpowder is to loosen such masses of slate from the rock as may be afterwards profitably worked; and the charge is calculated as nearly as possible to accomplish this loosening, and nothing more; too heavy a charge will blow the rock to pieces and destroy the property. The mass of slate thus loosened is afterwards deposited on the terrace-floor, and the next question is, what is to be done with it? Slate is applicable to a thousand purposes, from a slate table to a tile, or even the leaf of a pocket-book. If a portion of the mass is large enough for a table, so much the better; if not, it may do for a tombstone, or a door-step, or a chimney-piece, or a water cistern, etc., etc. For all such kinds of heavy work the slate is sawn into shape at the steam mills on the spot; but, after all, immensely the greater portion of all the slate that is quarried goes to the formation of tiles for roofing. Let us see, therefore, how these tiles are produced, leaving the heavier departments of slate-work, which cannot be said to differ materially from the ordinary work of the stone or the marble-mason.

Pursuing the course of one of the terraces to the left of the main working, we come upon a series of sheds erected far out of the range of the blasting, where the slaters can pursue their busy labours without interruption. The slate is supplied to these men and boys in huge shapeless fragments, from the size of a cubic foot to that of six or seven cubic feet, but, of course, in all conceivable forms such as fragments of rock will assume. It is the function of the slaters to convert these shapeless fragments into tiles, and this is done with a rapidity altogether wonderful, and with a certainty which looks almost like conjuration. Whatever be the form of the fragment, it will split in any part of its bulk to a hair's-breadth, and that by the simplest means. It is the splitter who first takes the fragment in hand. Standing it on its edge, he marks with a gauge the number of tiles he intends to get out of the whole thickness; he then takes a flat chisel, about two inches wide in the blade, and drives it with a mallet into the mark he has made, repeating the blows until the weapon has entered the stone to the depth of a few fingers: if the rock he is splitting is very large, he drives in a second chisel at some distance from the first, or even a third; and then, pulling them laterally, the thin portion of the slate marked off is seen first to bend like whalebone, and then to part from the solid mass in one unbroken sheet. When the tiles are large, this is a curious and rather startling sight. The splitter will get off half a dozen slates from the lump while the reader is reading the description of the process, because he has excellent reasons for wasting no time. Close by the splitter sits the cutter, with a long heavy weapon in his hand, which weapon is at once a knife and a gauge; he first gauges the slate he takes up from the heap, to see how large a tile it will make, and then, laying it on an iron straight-edge, before you could half say "Jack Robinson," gives it a couple of chops, and it is as big a tile as it will make.

This celerity in the operation is mainly due to the fact that the men are paid only for the tiles

they produce. The larger the tile, the higher the pay—a rule which prevents carelessness and waste. The tiles go by female designations of honour proportioned to their value. The largest are called queens, the next duchesses, marchionesses, and so on, down to ladies; and though that is not the case at Penrhyn, where very small tiles are not produced, it is said even down to "sluts." The men, working as they do by the piece, can earn good wages in average seasons; still, they never know exactly what they are earning. Like the Cornish miners, they are dependent a good deal on the yield of their mine. Let them work ever so hard, if the marketable produce is not of good quality as well as abundant, their labour will be ill requited. At the end of every month the owner of the quarry pays for the produce, according to a fixed scale, to the overseer, and the gains are fairly divided. The average is said to be about £5 per month per man.

Such a system of working, though attended with many advantages, has one disadvantage—it is not likely to be pursued with due caution. It is partly, perhaps, from this cause that accidents in this large quarry are frequent and serious, sometimes occurring almost daily. The proprietor has erected an hospital for their treatment in the neighbouring village, and there were at the time of our visit seven or eight cases in the surgeon's hands.

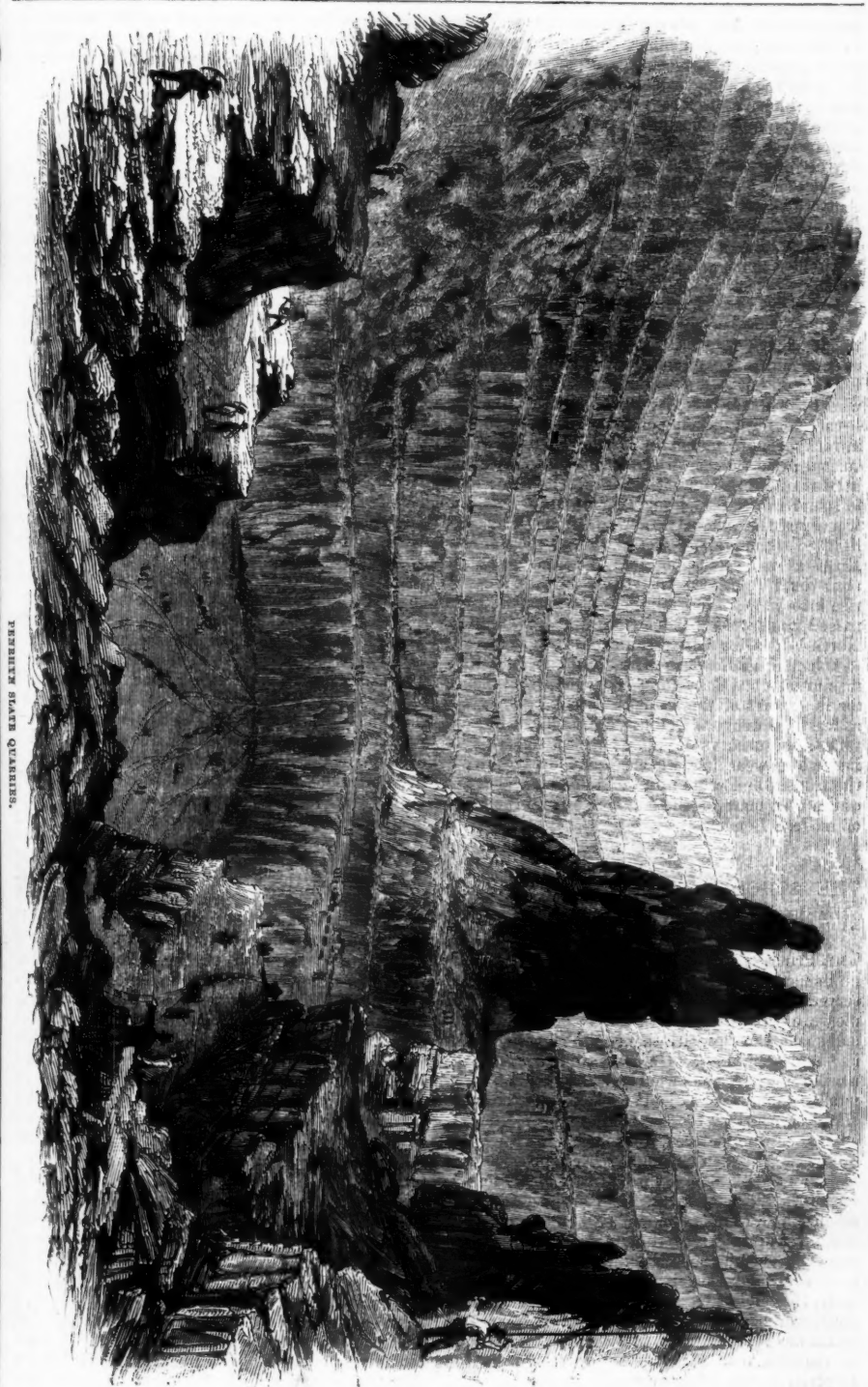
The slate quarries are said to afford maintenance to upwards of eleven thousand persons, including all the families of the workers; these people form the principal population of Bethesda, though they do not all reside there. Care has been taken to afford this large working population the means both of education and religious instruction, and these means are known to be appreciated by them, and to have been effectual in raising their moral status. The value of the quarry to the proprietor is estimated at £100,000 a year; it turns out two hundred tons of slates of all descriptions daily, and contains a store of the material sufficient, by all accounts, to maintain that rate of production for many centuries to come.

We have now all but finished our holiday ramble in North Wales, and indeed we should take the rail for London at once, were it not that we are longing for just a glance at Nant Francon, whose picturesque beauty has long been familiar to us by report. The coach from Bangor to Conway offers us an opportunity of gratifying that wish, and we accept it accordingly.

The route leads us again within view of the Penrhyn slate quarries, and we halt for a minute or two at that point in the road which faces the works, in order that the passengers may witness the ten o'clock blasting, which is due at the moment of our arrival. The spectacle at this distance is singular and striking, but it fails entirely in producing the impression which is derived by witnessing it on the spot. The reason is, that distances in this most clear atmosphere are so deceptive that it is difficult to realize, and therefore to allow for them. Seen and heard from the turnpike-road, the rock broadside shrank into a tame mimic display, and, but for the prolonged echoes of the blast, might have been deemed insignificant.

We travel on through a most picturesque and wilderness-looking route after leaving the quarry behind us, and in a little while enter the Vale of Nant Francon. Like the Pass of Llanberis, this beautiful valley is shut in by ranges of lofty mountains on either side, which from time to time deposit their detached débris in the hollows below. Unlike that Pass, however, Nant Francon is not all savage, the high mountain ridges do not always overhang the vale; here and there the meadows expand into open plains of considerable area; and, again, in the place of compact ranges of hills crowding one upon another, we have isolated mounds, and craggy, inaccessible peaks standing alone, or joined only at their bases with other and lower ones. A beautiful stream winds and frolics along the bottom, leaping among the brown stones, and dashing its white foam-like blossoms over the green waste. Then there are neat little homesteads visible here and there on the hill sides, and flocks of sheep and herds of cattle wander among the rocks and over the mountain sward, all telling of the presence of man, and of human hopes and interests. The road runs along the mountain side, in some parts several hundred feet above the bed of the little stream, on whose banks the angler, diminished to a doll, is pursuing his sport among the swift rapids. By and by we open upon the Ogwen Lake, a broad clear pool of water bounded on the south by a formidable three-headed mountain of most rugged outline and savage aspect, which frowns ominously even in the sunshine. The water of the Ogwen falls at its western end through a chasm in the rocks, and, tumbling in a succession of cataracts, dashes down a descent of more than a hundred feet. Just at this point it is crossed by the turnpike road; the coach, however, does not stop to allow of a deliberate view, and we catch but a glimpse of the Falls of Benglog, which would be far better seen from below than from the height at which we have to look down upon them. The road skirts the lake for more than a mile, and after leaving it ascends again, flanking the mountain ridges and affording a succession of charming landscapes, which flit past us like the canvas of a revolving panorama, until some familiar forms begin to appear in the distance—we are feeling ourselves again on ground travelled before—and then a sudden twist in the road, and we are bounding over the little bridge into Capel Curig.

From Capel Curig to Conway is a route which the reader has traversed with us before; but we came in rain and storm, and we return in the cloudless sunshine of a glorious summer's day. At the Swallow Fall the coach stops, and allows the passengers a quarter of an hour for a sight of the cataract. There stands the sturdy Welsh dame, with her daughter, ready to receive them and to show them the Lion, who, to judge from his silence—for we hear not a breath of his roaring—must be now completely tamed. We descend the steps with the rest; but where is the fall? In place of that vast wall of foam which we saw thundering down with such fury not a fortnight ago, we have the most agreeable and docile congregation of infant cascades imaginable. The rocks, and not the water, are now the chief beauty of the fall. The Swallow has moulted, and has hardly a feather left in his tail; the black rock



PERU STATE QUARRIES.

masses which form his nest are all bare and open to the view; the deafening, thundering roar has given place to an agreeable, sociable sort of babbling and splashing, which allows the visitors to join in the current of conversation. The scene is, notwithstanding, enchantingly fair, and we are not certain that we do not enjoy it more than in the day of its greatness and grandeur. The sunshine on rock and foliage—the dense shadows that concentrate in the hollows and over the deep pools—the glitter and sparkle of the spray, which, as it leaps over the topmost ridge, seems to spout from yon golden cloud—all together make up a spectacle which, if it lack sublimity, is at least rich in all other elements of beauty. Our fellow travellers, at any rate, are of this opinion, and the Niobe in wooden shoes, who does the honours, has no cause to complain to-day of any want of appreciation.

We stop but a few minutes at Bettws-y-Coed, where the Royal Oak sits all solitary this fine day—the artist-guests being off to their several studies, in rocky glen or mountain pass, or by the wooded stream; and thence we are soon bowled over the hard road into Llanrwst, where we have an hour to spend in renewing our acquaintance with the scenery of the vale. And now, in the flashing sunlight, we scour along the marge of the Conway River as it hastens towards the sea; and soon after three o'clock the ivied towers of the old castle rise into view; a few minutes later, and we have passed under the battlements, and our tour in North Wales, for this season at least, is at an end.

When King Edward, after spending his Christmas at his good Castle of Conway, departed thence for the banks of the Thames, it took him a week, at least, of weary travelling to accomplish the distance: seven hours does the business for us; and, instead of wearying, we sleep and dream during the transit, and wake up to find ourselves shot out of the very maw of the feudal ages into the arms of modern London.

THE SCHOOLMASTER AND HIS SON:

A MEMOIR OF THE THIRTY YEARS' WAR.

CHAPTER V.—THE HUNTSMAN OF ERLACH.

THE Prince of Erlach had lately engaged a new huntsman. He was a native of Bohemia, had served in the army for several years, and his great pleasure was to meet with any soldiery he could, and spend the day with them at the tavern, drinking and gambling. He was a man of sullen, morose temper, and would sit for hours in the public room, silent, and without showing the slightest courtesy to the landlord, or any of his customers who entered, until dice or cards were produced, and then he would rouse himself and be as lively as any man. It would be difficult to say, however, whether his curses, when the game went against him, or his grim smile when he won, were the most disagreeable to witness. This was the man who soon became the intimate friend of my poor son, and thus it happened. In the year 1631, the noble king of Sweden, Gustavus Adolphus, marched through this part of the country, and it was represented to him that we, his brothers in the faith, had suffered very severely from the Imperial troops being quartered in our town. I

think I see him yet, that royal warrior, looking so benevolently and respectfully at our burgo-master as he represented our sufferings with trembling lips. The king was on horseback, surrounded by the commanders of his regiment, and, turning to them, he said: "It would be unbecoming of us to quarter our troops upon our brothers in the faith, who have been so pillaged by our foes; they would think the Swedes as oppressive as the Imperialists. God forbid we should burden them thus! We are come to assist them." And he gave the town a charter of exemption from either infantry or cavalry being quartered within its walls. Many of our citizens who had fled, returned home upon hearing this, and any provisions, or whatever any one had for sale, was now brought out without hesitation, for all supposed the worst to be past. But it was not long after that a Swedish quartermaster rode in, and said that forty dragoons were coming immediately, and that we must provide them with meat and wine, and fodder for their horses. The commissary showed him the king's charter-letter. He looked at it without giving much attention to its contents, saying, "Want knows no law," and that King Gustavus Adolphus himself, if he were present, would not oppose him. The king, however, was at the Rhine by this time.

When the quartermaster had ceased speaking, he and the men who accompanied him went to the tavern which the huntsman frequented. There he sat, as usual, but the moment the quartermaster's trumpeter saw him, he exclaimed: "Are you not Frank Sorawitz, and have you not served under Wallenstein?" "Yes," answered the huntsman. "Then," said the trumpeter, "you are the very villain that treacherously shot my captain through the head, whilst we were at a parley in the year '25. You shall pay for it now." He drew his sword, and sprang towards the huntsman. He drew out his hunting-knife, and in a moment the tavern, the street, the whole town, was in an uproar. The townsfolk were so vexed at the Swedes threatening to quarter themselves in the town, that some took the part of the huntsman, others that of the Swedes, and others, dreading the consequence of the quarrel, tried their utmost to pacify both parties. The trumpeter vowed that the huntsman should not escape his vengeance, and that the town that harboured such a wretch should pay for it. The huntsman declared he would treat him as he had treated his captain, whenever he met him. They were separated by the townsfolk. The Swedes sprang to their saddles and rode off in great anger. The citizens then assembled in the open street, to consider what to do under the circumstances. Their terror was increased by Hans Budiger, who, returning from Uffenheim, told of all the mischief going on there. Some advised one thing, some another. The elder citizens reproached those who had taken part with the huntsman, saying it was folly to vex the Swedes for such a fellow as that. He had stood silent amongst the crowd, but now he exclaimed:—

"You cowardly set, to take such fright at a few Swedes, who scarcely staid a moment! I have not heard one of you speak like a man! What are your towers and walls for? What are your fists

for, if you will not use them? Give me here six fellows that have courage enough to fire a gun, and I will get you out of your scrape. Let any man that has a spark of courage join me!"

This speech was like a spark thrown into a barrel of gunpowder. In a moment my son was at his side, protesting that he and his comrades were ready to defend him to their last breath. All the young, and many of the older men, ran for their muskets, their lances, their staves, shut the town-gates, and, with shouts of joy, took their stand behind the loopholes of the walls. The huntsman, accompanied by Valentine and six other young fellows, posted themselves in the gate-house, to await there the arrival of the dreaded guests. Towards evening, we saw the Swedes approaching. They rode towards the gate, not expecting the slightest opposition to their entry. The commissary had given strict orders that, unless absolutely necessary, no force was to be used. When the Swedes found the gates shut against them, they demanded admittance in loud and angry tones, and oaths and curses. The commissary then read the king's letter in a loud voice, and offered to provide them with bread and meat, and a barrel of wine, if they would pursue their way at once, without entering the town. They reproached him and all the burghers as traitors, fired their guns into the air, and dismounting from their horses, threatened to batter down the gate. Just at this moment Klaus Mundheim came in sight, driving his cart down the hill, full of the billets of wood he had gone out in the morning to fetch from the forest. He of course knew nothing of what had passed during the day, and came straight on towards the town-gates. In a moment the dismounted men seized him, bound his hands, and threatened to hang him on the nearest tree if the gates were not instantly opened. When my son heard this, he called out, "Brothers, shall we see our townsman treated in this manner, and not attempt to deliver him from the hands of these wretches?" and, before any of the authorities could interfere, he and the six others had drawn back the bolts, and threw themselves on the dragoons.

They were so few in number that the soldiers would have overpowered them, but that the huntsman gave the word of command, and the guns posted in the loopholes were fired off at once. The soldiers were astonished, and probably counted on the town being really prepared to oppose their entrance, for they decamped carrying with them the body of the trumpeter, the only one amongst them hurt. The huntsman had aimed at him and shot him in the head. He fell from his horse, and life was extinct before they raised him from the ground. Valentine and his comrades ran to unbind Klaus, and all re-entered the town in triumph.

When the people had begun to arm, I had gone home. Being a man of peace I could not resolve to fight without necessity, and I called my wife and younger children to pray with me, for those that were too busy to pray for themselves. When we heard shots and screams my poor wife trembled, and put her hands over her ears to prevent her hearing such dreadful sounds. As they approached, however, I could perceive that they were shouts of joy and triumph, and we went forth to meet the crowd

coming back from the gates. First marched Valentine and the huntsman, arm-in-arm; then Klaus, who trembled so, however, that a young fellow walked on each side of him; and after them came a promiscuous crowd of men, women, and children. The commissary was with them, and as soon as he perceived me, he came forward, and, shaking me by the hand, said, "Schoolmaster, you have a brave son. I shall never forget the courage and sense that he has displayed this day;" and then he described the whole scene to me, and seemed as if he could never tire lauding and praising Valentine.

In reply to my question, where they were all going, he answered, "To the tavern, to drink the barrel of wine the dragoons had refused." These brave fellows deserved the best he could give them. I confess my heart did not respond to the praises lavished on my son. I was sorry to see him linked arm-in-arm with such a companion, and I felt that the house of prayer was where they should march, to return thanks to the Lord, for surely he it was that had delivered us from danger, though the crowd acknowledged only my Valentine and his companion. I said so to the commissary, but he laughed and bade me not look so gloomy, nor grudge the young their pleasure. Late, late in the night did the singing and shouting in the tavern continue. It was long past midnight when my son came home. The huntsman accompanied him to the door, and I heard him say at parting: "Well, brother, since I left the army I have not met so brave a fellow as you, nor did I ever expect to find a man that I could feel thus proud to be seen with. From this time forward let us be friends and comrades." I could scarcely refrain from calling out to my son, "Heed him not, heed him not; turn a deaf ear to all he says;" but I felt it was not the right moment, and I heard Valentine say, "Here's my hand upon it; be it as you say."

THE AMERICANS AT HOME.

WHETHER we enter the manor-houses of the South, where the ease and elegance of society testify to a class removed by birth and position from the toils of labour, or the stately mansions of merchants in the maritime cities, replete with every luxury which money can provide, or the neat farmers' dwellings in New England, redolent with all that makes a fireside happy and a nation great, or the rude huts buried in western forests, the abodes of men who conceal beneath a rough exterior minds guided by stern principle and hearts of sterling worth—amidst all the differences incidental to position, we shall be at no loss to discover that the guardian angel of America is the genius of home. "We read," says a recent transatlantic writer, "that 'God setteth the solitary in families.' The significance of this beautiful expression dwells in its last word. The solitary are not set in hotels or boarding-houses, nor yet in communities or phalansteries, but in families. The burden of solitude is to be lightened by household affections, and not by mere aggregation. True society—that which the heart craves, and the character needs—is only to be found at home, and

what are called the cares of housekeeping, from which so many selfishly and indolently shrink, when lightened by mutual forbearance and unpretending self-sacrifice, become occasions of endearment and instruments of moral and spiritual growth." The foregoing extract, while it expresses the profound conviction of the American people, at the same time implies a censure on the practice which so extensively prevails, especially in the larger cities, of families, chiefly young married couples, living in public hotels or crowded boarding-houses, instead of taking houses of their own. The reasons alleged for this custom are the difficulty of procuring good servants in a country where the labouring classes can employ their time much more profitably, the vexation and annoyance almost invariably given by the Irish girls who act in this capacity, the enormous rent demanded for apartments, and the high price of provisions. The indisposition of young ladies to undertake the responsibilities and troubles of attending to domestic arrangements, as long as they can live where they have plenty of servants and a sumptuous table, and as long as their husbands are good-natured enough to indulge their whims, may be added as a fifth and exceedingly potential cause of this uncomfortable, unnatural, and undesirable mode of living.

I one day visited no fewer than twenty-five of these boarding-houses in New York, in search of rooms suitable for the accommodation of my family during my absence in Cuba and the Southern States. Many of the handsomest mansions in the upper part of the city I found to be establishments of this nature, and I was not a little amused by the interviews I had with pompous dames, who received me in elegantly-furnished drawing-rooms, before showing me the dear and shabby apartments upstairs. This system does not obtain to such an extent in Philadelphia, where, it appears to me, there is far more real comfort than in the commercial capital. People there do not live in their basements, and keep their good rooms for show. The Quaker city can boast of a more refined, though not of a more ostentatious, aristocracy than its neighbour, New York. The fashionables of the latter do not understand how to make social intercourse really enjoyable. They know little or nothing of select dinner-parties and small evening companies, such as we entertain in Great Britain, but either expect their friends to drop in after tea of their own accord, or invite them to gatherings of two to five hundred people, crowded together in hot rooms, for the purpose of dancing the polka. These parties are given only about once a year, and cost in many cases extravagant sums of money. I heard of one to which seven hundred and fifty persons were asked, at an outlay of fourteen thousand dollars. The ladies, who consider themselves leaders of the fashion, boast of the number attending their balls; and, in order to swell that number, actually applied to a certain Mr. B——, sexton of a fashionable Episcopalian church, not one hundred miles from Union Square, who keeps a list of "desirable and likely" young men, delivers invitations, and himself acts as master of ceremonies. "Fast" gentlemen give him a fee of twenty to twenty-five dollars for the privilege of having their names entered on his list,

and thus being introduced to the *haut ton* of the Fifth Avenue. This I believe to be an institution quite peculiar to the other side of the Atlantic. To us, unsophisticated lovers of decorum in the old country, it savours somewhat of vanity and vulgar pomp.

The Americans, almost to a man, act on the maxim—

"Early to bed, and early to rise,
Is the way to be healthy, wealthy, and wise."

This habit goes far towards prolonging life, and neutralizing the effects of a dietary system which is most prejudicial to health. On the latter subject, Miss Bremer remarks with great justice: "I am becoming more and more convinced that the diet here is unwholesome, and is not suited to the climate, which is hot and stimulating. They eat hot bread for breakfast, as well as many fat and heating dishes, besides roast pork, sausages, omelets, and such like. In the evenings, especially at all suppers, they eat oysters stewed, or a salad and peach preserve, a peach ice, etc." The rapidity with which Americans devour their meals has become proverbial. I well recollect my astonishment at the first dinner which I witnessed on board a Western steamboat. No sooner had the captain taken his place, than my neighbours at table seized every dish within their reach, mixed roast veal, sausages, butter, puddings, tarts, sweet potatoes, bread, and cabbages on the same plate, and swallowed them heterogeneously, as fast as their hands could raise the viands to their gaping mouths. Six or seven minutes after the bell rung, a dozen fellows started up in breathless haste to pick their teeth and prepare their mouths for tobacco. But in this respect the Down Easters beat the Western men hollow. I shall never forget the inconceivable rapidity with which I saw meals discussed in the State of Maine. I found, however, a great change for the better in this respect during my last visit, although at the Virginia Hotel, in St. Louis (Missouri), out of two hundred and fifty who sat down to dinner, only twenty remained longer than ten minutes. It is needless to say how injurious this practice is to the health of the population. The mode of heating houses by means of stoves, which burn anthracite coals, also affects most prejudicially the sanitary state of the families who use them. Hawthorne, in his "Mosses from an old Manse," refers to this when he writes, "Our successors will have grown up amid furnace heat, in houses which might be fancied to have their foundation over the infernal pit, whence sulphurous streams and unbreathable exhalations ascend through the apertures of the floor." The wooden logs in the country give out a cheerful blaze; but in the towns the English fireplace has but a poor substitute in the "sullen stove."

Fenimore Cooper, in one of his works, remarks: "The good treatment of their women is the surest evidence that a people can give of their civilization;" and he adds, "and there is no nation which has more to boast of in this respect than the Americans." I had marked several passages from recent European writers for quotation, to verify this statement, and to prove, in the words of Mrs. Houston, that "a young and pretty girl may travel alone with perfect safety from Maine to Missouri, and will meet with nothing but respect

and attention the whole way;" but the fact is so patent and indisputable, that it would be a waste of time to bring forward elaborate testimony. The attention paid to the feebler sex in the United States, in drawing-rooms, steamboats, railroad-cars, and public assemblies, is well known to every one who has studied the subject; indeed, it is often carried too far, degenerating into a sort of homage, which the ladies, were they to consult their own dignity and self-respect, should not encourage. Fanny Fern, impressed with this spirit of exaction on the part of her countrywomen, thus rates them in her own happy style of irony: "When you enter a crowded lecture-room, and a gentleman rises politely—as American gentlemen always do—and offers to give up his seat, which he came an hour ago to secure for himself, take it as a matter of course, and don't trouble yourself to thank him, even with a nod of your head. As to feeling uneasy about accepting it, that is ridiculous! because if he don't fancy standing during the service, he is at liberty to go home; it is a free country! When you enter the cars, and all eligible places are occupied, select one to your mind, then walk up to the gentleman who is gazing at the fine scenery through the open window, and ask him for it with a queenly air, as if he would lose caste instantly did he hesitate to comply. Should any persons seat themselves near you, not exactly of 'your stamp,' gather up the folds of your dress cautiously, as if you were afraid of contagion, and apply a 'vinaigrette' to your patrician nose!" I have spent many agreeable hours with American ladies, and retain pleasant recollections of their liveliness and intelligence, but must candidly say that in the opinion, not only of all well-bred foreigners, but of many citizens also, the gentlemen treat them far too much like spoiled children; and if in this respect they boast of their civilization, it is the civilization of Don Quixote rather than of Christianity and common sense. "When I write my threatened book upon female education," observes Lord Jeffery to an American friend, "I must rank that of your free country among the most injudicious." However they may differ in other particulars, European travellers have expressed themselves with wonderful unanimity on this subject. Indeed, the evil is so self-evident, that the most prejudiced cannot fail to notice it. Young ladies, who in all other civilized countries would be considered mere boarding-school misses, in whom modesty is regarded as the most essential acquirement, in the United States, casting off all restraint, not only act an independent part and display an ease of manner savouring painfully of pertness and pretension, but actually assume the lead in society. Prematurely embarked on the sea of life, they acquire at an early age a self-confidence and a freedom of demeanour, by no means feminine or calculated to please an impartial spectator. Forward without genius, and talkative without information, they often render conversation frivolous, and overbear wiser heads by their loud assumption of unnatural dignity. It is repugnant to proper feeling to see married women, though distinguished for beauty and accomplishments, comparatively neglected in company, while girls of sixteen or seventeen, who have nothing to recommend them but thoughtlessness and volu-

bility, are surrounded with listeners. Nor is this abuse confined to the drawing-room and the evening party: it enters into the daily routine of domestic duties. Instead of assisting her mother, the lovely Miss M—— laughs at and snubs her, asks whom she pleases to visit at the house, and does nothing all day long but flirt, lounge, and read novels. It appears to me that the system of education at many of the ladies' academies encourages this prevalent folly; the proficiency of young misses in algebra, moral philosophy and physics, being published far and wide, and exhibited before admiring audiences, whilst the humbler but far more important engagements of domestic life seem to be entirely forgotten by both pupils and teachers. Above the portal of every such seminary, on the mind of every American matron, should be written in striking characters the words of Milton:

"For nothing lovelier can be found
In woman than to study household good."

If the damsels of the Great Republic would bestow more time in looking after the arrangements of the kitchen, the laundry, and parlour, and less on mathematics, Spanish, and light literature, the tone of society would be elevated, and the homes of the Western continent would become still more influential for good. My fair transatlantic friends may think these criticisms severe; but candour compels me to charge them further with the excessive love of dress, and with being so extravagant in this respect, that it is the most fertile subject of complaint on the part of husbands and fathers. Nothing is more common than for a lady to incur enormous bills to drapers all over town for silks, satins, and India shawls, without the knowledge of the unfortunate individual who must pay them; and when she goes to Newport or Saratoga for a month in summer, she orders a new dress for every morning, and another for every evening of her sojourn. The extent to which this silly vanity is carried would scarcely be credited, even in the gayest circles of Europe. Nor can I overlook the injury they do to their own health and the health of the nation, by not taking exercise. Not only in the towns, but in country quarters, they often sit from sunrise to sunset in rocking-chairs; the idea of walking appears shocking to them, and as to roaming in the woods or climbing hills, they would regard any one who proposed such a thing as a madman. Round a suffocating stove during winter, and diligently fanning themselves all summer, they lead a sort of butterfly life, which may yet tell most unfavourably on the succeeding generations.

"After all, it is not good," exclaims honest Miss Bremer. "No, it is not good, it has not the freshness of Nature, that life which so many ladies lead in this country; that life of twilight in comfortable rooms, rocking themselves by the fireside from one year's end to another; that life of effeminate warmth and inactivity, by which means they exclude themselves from the fresh air, from fresh, invigorating life. And the physical weakness of the ladies of this country must in great measure be ascribed to their effeminate education. It is a sort of harem life, although with this difference, that they, unlike the Oriental women, are here, in the Western country, regarded as sultaneesses, and the men as their subjects."

Having said so much against American ladies, it is but fair that I should say something in their favour. Few people, after they have been a week or two in the United States, fail to notice how very seldom they meet a plain-looking woman, excepting in districts frequented by the Celtic Irish. In Italy and the Grecian Archipelago, in Andalusia and in England, I have seen much more beautiful faces and forms than in any part of the Western world; but in none of these countries have the majority of the female sex such claims to correct features and pleasing expressions.

I must, therefore, do the American ladies the justice to say that they have other claims on our admiration. Strangers are frequently surprised at their mental accomplishments and originality of thought. Generally well read, and animated in their conversation, they strike one as remarkably intelligent; and their lively good-humour draws away attention from deficiencies arising from an injudicious system of tuition. Mrs. Stowe observes, that "with New England women conscientiousness is the granite formation which lies deepest, and rises out even to the tops of the mountains." I would indorse the sentiment, and extend its application, more or less emphatically, to the ladies of the Republic in general.*

INTRODUCTORY LESSONS ON THE MIND.

BY THE AUTHOR OF

"LESSONS ON REASONING," AND ON "MORALS."

LESSON III.

SECT. 1.—INSTINCT.

By the word *Instinct*, we understand a tendency to do some act without *design*, and without any thought of the object to be accomplished by that act.

Thus, a new-born calf, or any other young animal, before it has tasted milk, is led by instinct to seek the udder of the dam, and to suck. And birds are led to build nests, and bees a comb, by instinct, and without, of course, any design or thought of thus providing a suitable place for their young.

There are several instincts which belong in common to Man and to the Brutes. But the brutes are far more fully provided with them than we are; and the lower and less intelligent animals—such as the bee and the spider—are endowed with more instincts than the higher.

SECT. 2.—HUNGER AND THIRST.

Hunger and Thirst are instinctive tendencies common to us with the Brutes. For, though a Man is aware that food nourishes, and is necessary for the support of life, a new-born infant is equally sensible of hunger and thirst, and is just in the condition of the young of any other animal. It can have no knowledge that milk is nourishing, or that it is to be obtained by sucking. And the instinct of sucking is, itself, when you come to examine into the matter, something much more wonderful than you might, at first sight, suppose. Drawing in the breath exhausts the air within the mouth, forming something of "a vacuum," [as natural philosophers call it, *i. e.*, empty space,] and the pressure of air being thus removed from the part that is *within* the mouth, that which is *without* the mouth is so pressed by the air as to squeeze the milk into it.

* From "America and the Americans," by W. E. Baxter, Esq. M.P. London: Routledge.

Now, neither a new-born lamb, nor a new-born babe, nor, indeed, the greater part of grown men, know anything of this action of air, [the pressure of the atmosphere, as it is called,] and yet they act instinctively, just as they *would* do if they were well acquainted with the principles of natural philosophy.

All Instinct is something very curious and mysterious; but some of the instincts of the lower animals strike us as peculiarly wonderful. In their choice of the proper food for each kind, they are probably led by the scent. But this cannot be the case in all instances: for the squirrel, and the little bird called the nut-hatch, and several other animals, are led by instinct to crack *nuts*, on the kernels of which they feed; and it seems impossible that they should smell the kernel through the shell.

And it is very remarkable that several kinds of animals seek, and find, and provide proper food for their *young*, which is *not* food for themselves. Bees, for instance, collect the pollen of flowers, from which they prepare a food for the young grub [*larva*, as naturalists call it], that is afterwards to become a bee. They never eat this themselves. And bees, when they have no access to *flowers*, will continue to live in perfect health, if supplied with honey, but can never rear any young ones, because these can only feed on that preparation of *pollen*, which is called bee-bread.

Again: sparrows, and several other birds, which, when full-grown, live entirely on seeds, yet rear their young nestlings entirely on caterpillars and other insects, which they never themselves eat, but diligently hunt for, to put into the little open mouths ready to receive them.

SECT. 3.—INSTINCT BLIND.

Instinct is (as has been remarked above) a *blind* tendency—that is, independent of any design, or any knowledge of the object to be accomplished. Hence, you may often observe an instinct operating when it does not effect any object at all. For instance, the dog has an instinct to walk several times round the spot where he is going to lie down to sleep; and the object of it may be perceived when he is about to lie down in long grass: for by thus walking round and round, he tramples down the grass so as to form a bed, on which he lies down, curled round, as their manner is; but when he is about to lie down on a bare floor, he walks round the spot just in the same way. Again, the fox has an instinct to bury part of his food, so that he can return to the place where it is hidden when he wants it. He scratches a hole with his paws, puts in the flesh, and scrapes the earth over it, which he carefully pats down, and so leaves it. But a tame fox, chained up in a paved yard, goes through all the same motions when he has more meat than he wants to eat at once. He scratches on the pavement, lays the meat down on it, and goes through the action of scraping earth over it, and then leaves it on the surface of the pavement, just as it was at first. And any one who is observant of the habits of animals will find many other instances of the same kind.

SECT. 4.—MAN'S INSTINCTS INFERIOR.

Brutes possess, as I have said, many more instincts than Man; and these make up to them for their deficiency in reason. We, for instance, have no instinctive tendencies to build houses or to construct cradles for our offspring, answering to the burrows of rabbits and the nests of birds; and when we attempt to provide such things, from finding the need of them, we have no natural skill in doing this, but have to consider, and examine, and consult with one another as to the proper materials, and the mode of going to work.

Again, men have not the instinctive power that brutes have of distinguishing what is suitable food for

them, and what is unwholesome or poisonous. All animals that feed on herbage, feed among many plants that would be hurtful to them, and these they have an instinct for avoiding, so that they are seldom poisoned; but Man has no such instincts. The berries, for instance, of the deadly night-shade have no unpleasant smell, and have a sweet taste, so that children have often been poisoned by them. And a very remarkable instance is that of the cassava root, which is the chief food of the people of many parts of South America. There are two kinds of it, very much alike in appearance, one of which is commonly eaten roasted or boiled as potatoes among us; and the other, unless prepared in a particular manner by squeezing out the juice, is poisonous. There are also in the eastern seas several kinds of fish which have no disgusting appearance or taste, but which are poisonous.

SECT. 5.—USE OF FIRE.

The discovery of fire, again—at least of the mode of obtaining it, and still more of its *uses*—is most unlikely to have occurred to untaught men. If fire became known to them accidentally, as by a volcanic eruption, or a dead tree kindled by lightning, they would have been likely to fly from it in terror, especially if on approaching it they received a burn; and there was nothing to lead them to think that it could be employed to make many vegetable substances—such as corn, and most others that we use—fit for human food. Nor, indeed, could it have occurred to them that those substances ever could afford nutriment at all; since it is only by the action of fire that they can be made fit for our use. Accordingly, that the use of fire was a direct gift from Heaven, seems hinted in the ancient fable of Prometheus (*i. e.*, the Provident), who is recorded to have brought it down from heaven.

SECT. 6.—MAN LEFT ORIGINALLY UNTAUGHT.

There is good reason, therefore, to think that, (as was remarked in the "Lessons on Religious Worship," Les. 1, Sect. 7,) if the first generation of mankind had been left, as the brutes are, wholly untaught, and under the guidance of unaided reason and instincts alone, the whole race would have perished before they had learnt to provide for their wants. They would have died either from starvation, from not knowing what things would afford them wholesome food, and from ignorance of the use of *fire*, or from being poisoned, or from cold and wet, when they had not learned to protect themselves, either by clothing, or houses, or fires. But if enough of this first generation did survive, and invent those rude arts which are necessary for even the wildest savages (which is extremely unlikely); then the whole world would have been peopled with none but savages at this day. For all experience proves (as is pointed out in the Lesson above alluded to) that savages, untaught and unassisted by civilized man, never did, nor ever can, civilize themselves. And since the first generation of mankind could not have been taught by other *men*, they must have received at least some small degree of instruction, enough to enable them to subsist, and to advance in the arts of life, from some *other Being*. And thus we have, from the very nature of the case, a confirmation of what we read in the Book of Genesis, that mankind had, at first, some direct communication from the Creator.

SECT. 7.—REASON OF BRUTES.

Man is, as I have said, far below the Brutes in Instincts; but this is much more than made up to us by a great superiority in *Reason*, and in the use of *Language*. Indeed, it is common to hear people speak of Reason and the use of Language as altogether confined to Man. But this is not correct, for some of the higher Brutes do manifestly possess some portion of such in-

telligence as we call Reason in Men; and if so, we ought not to give it a different name in other animals. We all know that many animals are capable of being *taught* various things, and it would be absurd to speak of their doing by *Instinct* what they have been taught to do. And though they are not able to speak themselves, they are capable of understanding much of what is said to them. A dog will easily be taught to know his name, and to lie down at the word of command, and to fetch what he is sent for, etc. And it is curious to observe, in the shepherd's dog in particular, how well he understands his master's words and signs, and takes the best means for effecting what he is told to do.

In many parts of the continent you may find a corn-field adjoining a pasture-field, without any fence between them. The shepherd's dog is made to understand that it is his business to keep the sheep from trespassing into the corn. And for this purpose he is perpetually coursing up and down between the two fields. He never molests the sheep that are browsing on the grass, nor do they at all shrink from him when he runs close to their noses. But whenever a sheep has passed the boundary, the dog rushes at him to bite him, and drive him back; and the sheep, on seeing the dog coming, starts back in terror. Now this plainly shows intelligence, not only in the dog, but in the sheep also. To speak of their acting in this manner by *Instinct*, would be to talk at random.

SECT. 8.—DIFFERENCE OF MAN AND BRUTE.

But the differences between Man and the Brutes seem to be in many points not differences in *degree* merely, but in *kind*. For an intelligent Brute is not like a stupid Man, but, in some respects, very superior, and, in others, very inferior.

Some of the human faculties seem to be nearly wanting in Brutes; and of some they seem to be wholly destitute. Among others, the power of using language as an *instrument of thought*, so as to form *general terms*, by which we carry on a process of *reasoning* (as was pointed out in the "Lessons on Reasoning," Lesson 8), seems to be totally wanting, even in the most intelligent Brutes. And this seems to be the main difference between the Brute-mind and the Human. They have some portion of what may be called *Reason*, but are incapable of *reasoning*; because that is a process which can only be carried on by the use of *general terms*. And the degree in which they can be brought to understand language does not extend to that.

LIVING AND DYING.—The late Rev. Dr. Newton was once speaking of a lady who had recently died. A young lady immediately asked, "O, sir, how did she die?" The venerable man replied: "There is a more important question than that, my dear, which you should have asked first." "Sir," said she, "what question can be more important than 'How did she die?'" "*How did she live?*" he replied.

THE roots of plants are hid under-ground, so that themselves are not seen; but they appear in their branches, flowers, and fruits, which argue there is a root and life in them. Thus the graces of the Spirit planted in the soul, though themselves invisible, yet discover their being and life in the tract of a Christian's life, his words, his actions, and the frame of his carriage.—*Leighton*.

HAPPINESS depends upon the prudent constitution of the habits.

Few people know how brave or how cowardly they really are.

TIME is a ship which never anchors.

LET nothing get between heaven and prayer, but Christ.

Varieties.

THE EXTENT OF VEGETATION.—The world around us is clothed with a mantle of living verdure. From the lowly daisy to the majestic oak, there are classes and systems, divisions and sub-divisions of plants and vegetables, which almost defy numeration. Their variety is endless, admirable, astonishing; yet they form but a part of the whole, comparatively unnoticed and unknown. There is a world of vegetable life, as beautiful in arrangement and wondrous in detail as that around us. To examine it, the microscope is necessary, so minute are the objects to be viewed. By the aid of that instrument, we find the mould which is formed on stale bread to be a collection of little plants, each bearing a pod filled with seed, and as complete and exquisite in formation as any flower or shrub with which we are acquainted. The blue mould on the decaying apple or old cheese, the moss on the wall, and the green deposit on exposed glass, are all formations of the same description. Even some diseases of the skin may be traced to the same cause. What an evidence of God's unsearchable wisdom does this subject afford! Let the unregenerate view the hand of that God against whom he is striving; see the expressions of his mercy and love, and be persuaded to turn from his sins and embrace Christ as he is, freely and fully offered. And let the Christian take courage! here he will meet disappointments, troubles, and vexations, for they are promised, and he may expect them; his friends may be taken away, his purposes crossed, his own health prostrated; but let him not be cast down at any or all of these things. The tiniest blade of grass reproves his distrust and ministers a lesson. It is this: "If God so clothe the grass of the field, which to-day is, and to-morrow is cast into the oven, how much more shall he clothe you, oh ye of little faith." Let this gracious assurance satisfy and suffice.

AFRICANS AND THE MAGIC LANTERN.—Shinte was most anxious to see the pictures of the magic lantern; but fever had so weakening an effect, and I had such violent action of the heart, with buzzing in the ears, that I could not go for several days; when I did go for the purpose, he had his principal men and the same crowd of court beauties near him as at the reception. The first picture exhibited was Abraham about to slaughter his son Isaac; it was shown as large as life, and the uplifted knife was in the act of striking the lad: the Balonda men remarked that the picture was much more like a god than the things of wood or clay they worshipped. I explained that this man was the first of a race to whom God had given the Bible we now held, and that among his children our Saviour appeared. The ladies listened with silent awe; but, when I moved the slide, the uplifted dagger moving towards them, they thought it was to be sheathed in their bodies instead of Isaac's. "Mother! mother!" all shouted at once; and off they rushed helter-skelter, tumbling pell-mell over each other, and over the little idol-huts and tobacco-bushes; we could not get one of them back again. Shinte, however, sat bravely through the whole, and afterwards examined the instrument with interest. An explanation was always added after each time of showing its powers, so that no one should imagine there was aught supernatural in it; and had Mr. Murray, who kindly brought it from England, seen its popularity among both Makololo and Balonda, he would have been gratified with the direction his generosity then took. It was the only mode of instruction I was ever pressed to repeat. The people came long distances for the express purpose of seeing the objects and hearing the explanations.—*Livingstone's Travels.*

A COLOSSAL ODIN.—At last we saw in the west, far out at sea, the four towers of Threnen, rising perpendicularly many hundred feet from the water. Before us was the *hasteman* or horseman, who bristles his rocky steed with the polar circle. At first, he appeared like a square turret crowning an irregular mass of island rock, but, as we approached, a colossal head rounded itself at the top, and a sweeping cloak fell from the broad shoulder, flowing backward to the horse's flanks. Still there was no horse; but here again our captain took the steamer considerably out of her course, so that at the distance of a mile, the

whole enormous figure, 1500 feet in height, lay clearly before us. A heavy beard fell from the grand Jupitolian head; the horse, with sharp ears erect and head bent down, seemed to be plunging into the sea, which was already above his belly; the saddle had slipped forward, so that the rider sat upon his shoulders, but with his head proudly lifted, as if conscious of his fate, and taking a last look at the world. Was it not All-Father Odin, on his horse Sleipner, forsaking the new race who had ceased to worship him? The colossi of the Orient—Rameses and Brahma, and Boodh—dwindle into insignificance before this sublime natural monument to the lost gods of the North.—*Bayard Taylor in Northern Europe.*

THE STROKE.—Strokr (or "the churn"), you must know, is an unfortunate Geysir, with so little command over his temper and his stomach that you can get a rise out of him whenever you like. All that is necessary is to collect a quantity of sods and throw them down his funnel. As he has no basin to protect him from these liberties, you can approach to the very edge of the pipe, about five feet in diameter, and look down at the boiling water, which is perpetually seething at the bottom. In a few minutes the dose of turf you have just administered begins to disagree with him; he works himself up into an awful passion; tormented by the qualms of incipient sickness, he groans, and hisses, and boils up, and spits at you with malicious vehemence, until at last, with a roar of mingled pain and rage, he throws up into the air a column of water forty feet high, which carries with it all the sods that have been chucked in, and scatters them scalded and half-digested at your feet. So irritated has the poor thing's stomach become by the discipline it has undergone, that even long after all foreign matter has been thrown off it goes on retching and sputtering until at last nature is exhausted, when, sobbing and sighing to itself, it sinks back into the bottom of its den.—*Lord Dufferin's "Letters from High Latitudes."*

NATIONAL BEVERAGES.—All Europe has chosen its prevailing beverage. Spain and Italy delight in chocolate; France and Germany, Sweden and Turkey, in coffee; Russia, Holland, and England in tea; while poor Ireland makes a warm drink from the husks of the cocoa, the refuse of the chocolate mills of Italy and Spain. All Asia feels the same want, and in different ways has long gratified it. Coffee, indigenous in Arabia or the adjoining countries, has followed the banner of the prophet wherever his false faith has transpired. Tea, a native of China, has spread spontaneously over the hill country of the Himalayas, the tablelands of Tartary and Thibet, and the plains of Siberia—has climbed the Altai, overspread all Russia, and is equally despotic in Moscow as in St. Petersburg. In Sumatra, the coffee-leaf yields the favourite tea of the dark-skinned population, while central Africa boasts of the Abyssinian *chaat* as the indigenous warm drink of its Ethiopian people. Everywhere un-intoxicating and non-narcotic beverages are in general use—among tribes of every colour, beneath every sun, and in every condition of life.—*Professor Johnstone.*

TROUBLES.—We may compare the troubles which we have to undergo in the course of this life to a great bundle of faggots, far too large for us to lift. But God does not require us to carry the whole at once; he mercifully unties the bundle, and gives us first one stick, which we are to carry to-day, and then another, which we are to carry to-morrow, and so on. This we might easily manage, if we would only take the burden appointed for us each day; but we choose to increase our troubles by carrying yesterday's stick over again to-day, and adding to-morrow's burden to our load before we are required to bear it.

SLEEPINESS PROMOTED BY BAD VENTILATION.—I maintain that so long as our churches are so oppressively warm, and so improperly ventilated, as they are at present, just so long will it be impossible for our congregations always to keep awake. The spirit is willing, but the flesh is weak, very weak, and should be aided in its attempts to keep awake, instead of, as now, having every encouragement given it and every facility afforded it for going to sleep.—*American Paper.*